

Claims

- [c1] 1. A light guide plate structure applied to a back light module and adapted to transform a liner light source into a plate light source, the guide light source structure comprising:
- a light guide plate, comprising at least one light incident surface, a light scattering surface and a light emitting surface, wherein the light incident surface is on a side-wall of the light guide plate, the light scattering surface is on a bottom surface of the light guide plate, the light emitting surface is on a top surface of the light guide plate, wherein the light scattering surface has a plurality of notches; and
- a plurality of transparent elements, disposed within the plurality of notches, wherein a reflective index of the plurality of transparent elements is different from that of the light guide plate.
- [c2] 2. The light guide plate structure of claim 1, wherein the plurality of transparent elements is comprised of a glass or an acrylic material.
- [c3] 3. The light guide plate structure of claim 1, wherein the light guide plate is a mesa light guide plate, the plurality

of transparent elements have different sizes, the plurality of transparent elements are disposed on the light scattering surface in sequence by the size thereof, and bottom surfaces of the plurality of transparent elements are substantially on a same surface.

- [c4] 4. A back light module adapted to provide a plate light source, the back light module comprising:
a light guide plate structure, comprising:
a light guide plate, comprising at least one light incident surface, a light scattering surface and a light emitting surface, wherein the light incident surface is on a side-wall of the light guide plate, the light scattering surface is on a bottom surface of the light guide plate, the light emitting surface is on a top surface of the light guide plate, and wherein the light scattering surface has a plurality of notches;
a plurality of transparent elements, disposed within the plurality of notches, wherein a reflective index of the plurality of transparent elements different from that of the light guide plate; and
a liner light source next to the light incident surface of the light guide plate, wherein light from the liner light source transmits the light incident surface and enters into the light guide plate, and the light scattering surface passes the light to the light emitting surfaces and out

thereof.

- [c5] 5. The back light module of claim 4, wherein the plurality of transparent elements is comprised of a glass or an acrylic material.
- [c6] 6. The back light module of claim 4, wherein the light guide plate is a mesa light guide plate, the plurality of transparent elements have different sizes, the plurality of transparent elements are disposed on the light scattering surface in sequence by the size thereof, and bottom surfaces of the plurality of transparent elements are substantially on a same surface.